

1997 ANNUAL REPORT

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City Engineering News

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**Terrace Lake Road
Phase One Construction**

DECEMBER 1997

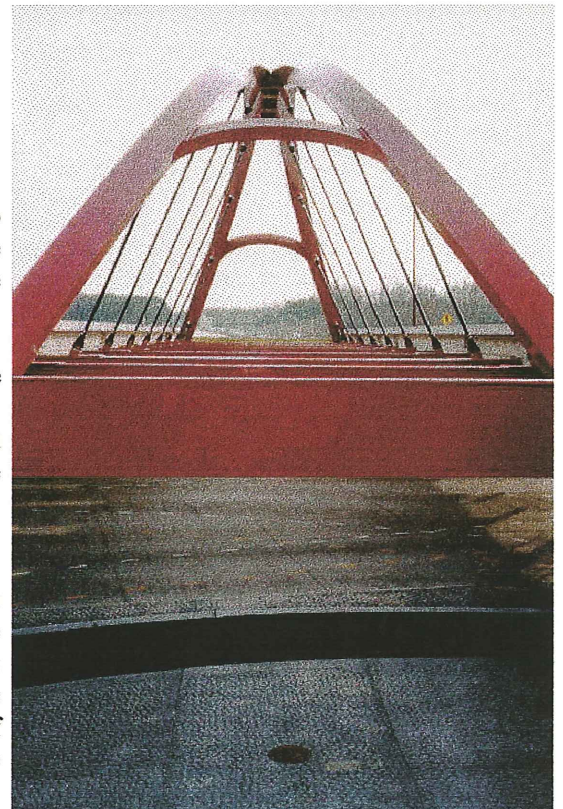
A Publication of the City Engineer's Office

New Interchange Dedicated



On August 28, the Front Door Committee, along with state and city officials, dedicated the recently completed interchange at State Road 46 and Interstate 65. The \$23 million project was constructed by Milestone Contractors of Columbus. The project was designed by Woolpert Consultants. The overpass was designed by J. Muller International.

The completion of the project was welcomed by the public who had to deal with traffic delays during the construction, which had lasted nearly two years. City Engineer David Hayward believes that the interchange is handling traffic very efficiently and safely. He expects to see a sharp decrease in the number of accidents at the interchange.



Second Street Bridge Contract Awarded

The Indiana Department of Transportation has awarded a contract to Milestone Contractors for the construction of the new Second Street bridge. The \$10.4 million project is expected to take 18 months to construct. The unique bridge was designed by J. Muller International.

The new bridge will carry eastbound traffic into the downtown area. Following the completion of the new bridge the existing Third Street bridge will be rehabilitated to carry westbound traffic.

The west approach to the new bridge is being constructed across an old landfill, which is an EPA superfund site. The city believes that this is the first time that a roadway has been constructed on such a site.

Committee Seeks Improvements to SR 46

The Front Door Committee is now focusing on the completion of the design and right-of-way acquisition of SR 46 between SR 11 and I-65. This segment is the final phase of the Front Door Project. Construction of the \$6 million project is expected to begin in the spring. This phase includes the reconstruction of the deteriorated pavement, installation of lighting and landscaping, construction of sidewalks in the commercial area, and paving a People Trail on the north side of the highway.

New Committee Formed to Pursue National Road Improvements

In December, Mayor Fred Armstrong called together a group of people interested in seeking improvements along US 31. "We hope that by working with INDOT, this committee can keep the project on schedule and make this a community project rather than a state project" Armstrong said. The current INDOT schedule calls for construction to begin late in 2004.

City Announces 1998 Construction Plans

City Engineer David Hayward has announced that the completion of the Terrace Lake Road improvement project will be his top priority next year. Other projects planned for next year are the widening of Rocky Ford Road from Central Avenue to Middle Road and construction of a storm sewer extension along Chestnut Street between 3rd and 5th Streets. Work may also be needed on Road 400N in conjunction with the County's planned renovations and re-opening of the bridge along that road.

New Traffic Signals Planned in 1998

Two new traffic signals are planned for installation next year in Columbus according to City Engineer David Hayward. One new signal will be installed on Road 450S at the new Fire Station No. 6 to warn motorists when the fire apparatus leaves the station. The other new signal is being designed by INDOT for the intersection of 25th Street and Hawcreek Avenue.

Opinion

"We've never done it that way." "Don't rock the boat." Please don't use these phrases around me. I don't like to do business that way. In fact most experts agree that we can no longer do business that way.

The City Engineer's office has challenged traditional thinking this year from restructuring the staff duties and functions to testing new products and processes.

The organizational structure of the department had not been changed in many years. Late in 1996, due to some departures within the department, we began to examine our mission and how we were attempting to accomplish that mission. We have found some ways to become more productive and we also found that we were not always focused on our mission. We have found some structural limitations on our reorganization (like our telephone system), but we will continue working to eliminate those limitations or work around them. By getting more people working together, focused on our mission, we have accomplished more this year in some areas than any other year in recent history.



The department has also pursued, researched, and tested several new (and some old) products and processes this year. The whitetopping article on page 4 describes one new process. Other new products and processes included the use of freeze resistant concrete and the use of rejuvenating agents on asphalt pavement. Crack sealing is an old process which was used again this

year using some proven materials and some new sealants and processes.

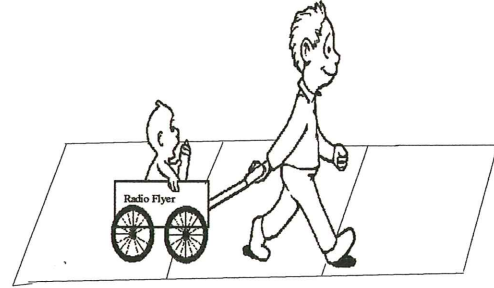
The City Engineer's office is a group of dedicated individuals who are committed to providing the City and its residents with the best possible service. That means that we have to find new solutions to problems and occasionally go back to some old solutions, but we can't just do things the way we've always done them.

We look forward to improving our efficiency and effectiveness in 1998.

David Hayward, P. E., City Engineer

WalkWorks 98

Walking around Columbus is getting much easier and safer thanks to the WalkWorks program.



WalkWorks 98 will install new sidewalks for about ½ the cost of hiring a contractor on your own. The cost to participate in *WalkWorks 98* is \$6 per lineal foot of sidewalk.

Call 376-2540

Applications are due February 15, 1998.

WalkWorks 98

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the day the
most
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1997
INTERSECTION ACCIDENT REPORT
CITY OF COLUMBUS, INDIANA



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TERRACE LAKE ROAD UNDER CONSTRUCTION



Since 1990, when Terrace Lake Road was annexed into the City, improvements to the road have been discussed. Now they are becoming a reality. Reconstruction of the road began on September 18.

The project, between Road 200S and Shields Drive, was designed by SIECO, Inc. "The design of the project was especially challenging because of the large number of driveways along the road" said Roger DeVore of SIECO. The project includes filling several valleys, cutting several hills, widening the pavement, and installing curbs. SIECO, Inc. also acquired the rights-of-way for the project.

The \$520,800.00 construction contract for the first phase of the project was awarded to Milestone Contractors on July 15, 1997. Utility relocations delayed the start of construction until September. Since that time, the road has been closed to through traffic. Milestone expects to re-open the road in December.

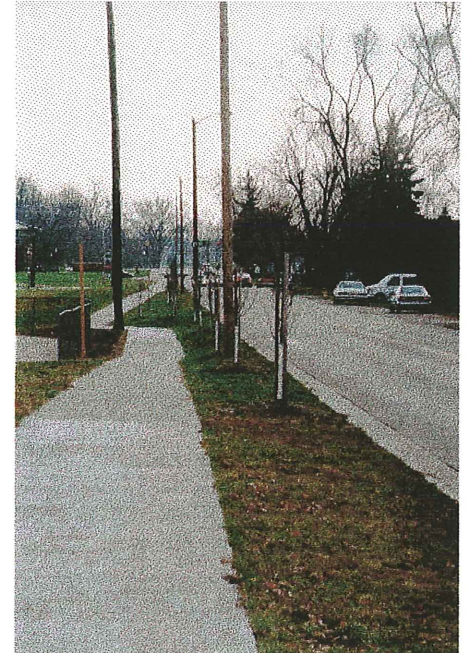
Bids for the final phase of the project will be opened early in 1998, with completion of the entire project anticipated in August. During the final phase, sidewalks will be installed along the east side of the road.

Upon completion, the road will be a much safer route for the 2,000 vehicles using it on a daily basis.



HAWCREEK AVENUE PROJECT COMPLETED

On July 16, 1996, the Board of Public Works and Safety awarded a contract to Milestone Contractors for improvements to Hawcreek Avenue from 19th Street to 25th Street. The total project cost was \$309, 835.00.



The project included the installation of storm sewers, curb and sidewalks on the east side of the street, and widening the street by six feet. The street widening was completed in December, 1996. The sidewalk People Trail, tree planting, and seeding was completed in the spring of 1997. The project was designed by Woolpert Consultants.

Traffic volumes on Hawcreek Avenue have continued to increase. The Indiana Department of Transportation is planning to install a new traffic signal at the intersection with 25th Street in 1998.

CITY ENGINEERING STAFF

David Hayward	City Engineer
Steve Rucker	Asst. Engineer
Randy D. Sims	Senior Technician
Rebecca Douglas	Technician
Shawn Plummer	Technician
Randy K. Sims	Technician
Stacey Sanford	Part-time Secretary



WalkWorks 97, the City's sidewalk replacement program, was offered to all residential property owners in the city this year.

This was the sixth year for the program which was established to encourage property owners to replace unsafe, deteriorated sidewalks and to build new sidewalks. Property owners paid \$6 per linear foot of sidewalk.

WalkWorks 97 replaced 4506 linear feet of sidewalk across 66 residential lots. The total cost of the program was \$65,247 with property owners contributing \$29,898. Included in WalkWorks 97 was the installation of 25 new curb ramps in conformance with the Americans with Disabilities Act.

In the 6 year life of the WalkWorks program, 33,106 feet (over 6 miles) of sidewalks have been replaced across nearly 450 residential lots and over 185 curb ramps have been installed.

WalkWorks is expected to continue in 1998 with applications due in February.

CurbWorks 97

In October, the City announced an incentive program to encourage the replacement of curbs in the historic district. The historic district is generally bounded by 2nd Street, Chestnut Street, 14th Street, and Washington Street. Property owners were required to pay \$10 per lineal foot of curb, about half of the cost. This is a pilot program which has grown out of the successful WalkWorks program.



Seven CurbWorks applications were received and approved. A total of 332 feet of curbs will be replaced by the project. Also included is the reconstruction of two curb radii including ramps.

The Board of Public Works and Safety was scheduled to open quotes for the project on December 16. The work is expected to be completed by April 15, 1998. The availability of this program in 1998 will depend on the availability of funds after completion of the WalkWorks program.



In July, the City completed the installation of 55 new curb ramps along streets which were to be repaved. That work was completed by North Contracting at a cost of \$12,545.

In November, the City awarded a second curb ramp project to Meshberger Construction at a cost of \$5,200. That project, containing 13 new ramps, is expected to be completed by January 30.

All of the ramps were designed and constructed to meet the requirements of the Americans with Disabilities Act (ADA). The ramps are easy to see; they are poured with a red pigmented concrete and are tined for use by the visually impaired.

SIDEWALKS

The City contracted with K & M Construction in December, 1996 for the construction of new sidewalks at Middle Road and Cedar Crest Drive and at Pinebrook Drive and Central Avenue. The sidewalks were completed at a cost of \$2,788. These sidewalks completed the sidewalk systems following the completion of Middle Road and Central Avenue.

PEOPLE TRAIL EXTENSION

In April, the City Engineer's office prepared plans and specifications for the extension of the People Trail from IUPUC to Bakalar Green. The Park Board awarded the contract to CASE Construction on May 29. The project cost \$49,990 and was completed in July. The project also included the installation of 8



new curb ramps. This project was a joint effort of the Columbus Parks Department, the Columbus Municipal Airport, and the City Engineer's office.

NEW STREETLIGHTS INSTALLED

The City Engineer's office, working with Cinergy PSI, installed new streetlight systems along Central Avenue project between Rocky Ford Road and Bakalar Drive, on 10th Street and Taylor Road from Marr Road to 25th Street, on Middle Road, and on Hawcreek Avenue from 19th to 25th Street. The City is continuing to work with Cinergy PSI to install new streetlights along SR 46 from Goeller to 350W, which should be completed early in 1998.

THOROUGHFARE PLAN NEARING COMPLETION

After several years of study and effort, the City's new thoroughfare plan is nearly ready for adoption. The thoroughfare plan serves as a planning tool which is used by the planning staff, Plan Commission, Board of Public Works and Safety, and the engineering staff to determine the locations of streets in new subdivisions and to plan street improvement projects.

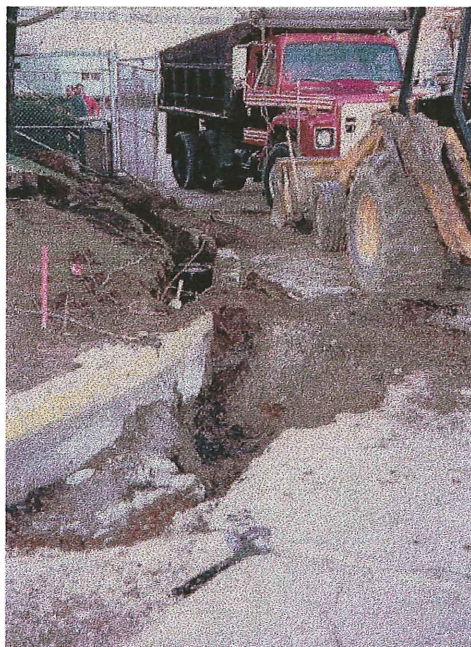
The current plan, adopted in 1968 and revised several times, has served the City well, but needs to be updated. The engineering staff made the completion of this plan a top priority for 1997. A committee of plan commissioners, city council, staff, developers, and business people, which was formed to review the plan, completed its work early in 1997. The Plan Commission and City Council held four work sessions to discuss the plan in October and November. The plan will now be revised and presented to the Plan Commission and the City Council early in 1998.

NEW STREET CUT ORDINANCE IMPLEMENTED

The City Council adopted a new ordinance at its December 17, 1996 meeting which restricted excavations within city streets. The ordinance was patterned after the county's ordinance, making it easier for the utility companies and

contractors to understand and comply with the requirements. Some of the goals of the ordinance are more timely and better quality repairs of street cuts, time limits for work on busy streets, and more equitable bonding provisions.

The new requirements were implemented in 1997. Utility companies and contractors have been informed and trained on the new requirements.



NEW DIRECTIONAL SIGNS

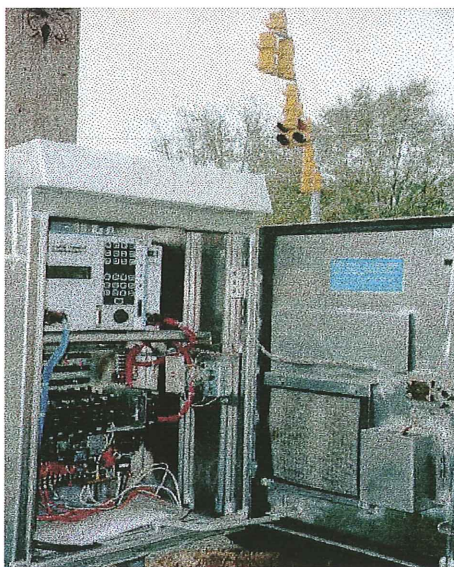
New directional signs are expected to be installed on some of the City's major streets in 1998. The signs are a part of the wayfinding project, which has been planned since 1995. Early in 1998, trial signs will be installed along 2nd Street, State Street, and Gladstone Avenue. Those signs will be evaluated and permanent signs will be installed city-wide later in the year.

The sign system is being designed by Corbin Design of Traverse City, Michigan through a contract with the Chamber of Commerce Foundation. The project is funded by the Cummins Engine Foundation, Columbus Area Chamber of Commerce, Visitor Center, City of Columbus, and several local companies.

TRAFFIC SIGNALS UPGRADED

The Columbus Board of Public Works and Safety contracted with Signal Construction, Inc. to modernize the traffic signals at the intersections of 7th and Hawcreek, 8th and Hawcreek, 10th and Central, and 17th and Gladstone.

The work at each intersection included the installation of a new solid state electronic controller and new signal heads. The signal upgrade cost \$44,983. The work was completed in October. In 1998, the City plans to replace the four remaining electro-mechanical controllers with solid-state equipment.



NEW TRAFFIC SIGNAL AT CUMMINS ENTRANCE

In March, a new traffic signal was installed on Central Avenue (formerly Hawcreek Boulevard) at the entrance to the Cummins Plant No. 1 expansion. When the plant is completed and operating, the new entrance is expected to be used by more than 150 delivery trucks and over 500 employees per day.

OVERHEAD SIGNS TO BE REPLACED

New signs have been ordered to replace overhead signs which have been in place since the late 1970's and early 1980's. The new signs are being produced by Hall Signs in Bloomington. The signs are expected to be delivered and installed early next year. "As traffic signs age, they lose their reflectivity. The new signs should be much more visible at night" according to Mike Patterson, Traffic Department foreman.

SOUTH GLADSTONE RAILROAD CROSSING IMPROVED

After several years of waiting for federal funding, the railroad crossing on South Gladstone Avenue has finally been improved. Working with INDOT and the Louisville and Indiana Railroad Company, the new crossing surface was installed in July.

Facts and Figures

Miles of streets in Columbus	211.4
Miles of asphalt streets	202.1
Miles of concrete streets	9.3
New miles of streets this year	7.31
Number of traffic signals	23
Estimated number of traffic signs	12,756
Number of street cut permits 1997	171
Number of street or alley closings 1997	158



NEW SUBDIVISION STREETS CONSTRUCTED

The construction of new subdivisions and new homes continued at a fast pace in 1997. Forty-four new streets were accepted by the city in eleven new subdivisions while construction began in several other subdivisions. A total of 38,599 feet (7.31 miles) were added to the city's street inventory.

The streets and their lengths accepted by the city are as follows:

Able (All Saints Manor)

Yellowwood Dr. 400

Breakaway Trails

Arapahoe Trail 783
Cheyenne Dr. 494
Grange Dr. 147
Iroquois Trail 1827
Sioux Trail 938
Parkside Dr. 687

Airport Industrial Park

Chapa Dr 1977
Wade Dr. 898
Ray Boll Blvd. 1018

Cross Creek

Cross Creek Dr. 878
Short St. 343
Southside Dr. 597
Wandering Way 907

Pintail Point

Pintail Ct. 1158
Line Oak Dr. 487

Jefferson Park

Countess Dr. 464
Liberty Lane 747
Monticello Dr. 316
Thomas Trace 565

McCulloughs Run Sec. 3

Laramie Trail 550
Regency Drive 786
Talley Road 541

Northbrook

Autumn Ridge 820
Breckenridge Dr 820
Deerbrook Dr. 550
Northbrook Dr. 550

Prairie Streams Estates

Conestoga Ct. 370
Conestoga Trail 1548
Meadow Ridge Rd. 1741
Pioneer Place 1265
Prairie Stream Way 3442
Schooner Ct. 450
Sloan Valley Dr. 501

Talley Square

Stratton Ct. 1287

Turtle Bay

Box Turtle Ct 515
Channel Dr. 1712
Leatherback Dr. 1499
Leatherback Ct 1100
Turtle Bay Parkway 1186

Westlake Park

Black Oak Dr. 503
Boxwood Ct. 355
Treeline Dr. 392
Honey Locust Dr 485

DRAINAGE REPAIRS COMPLETED

The city awarded contracts totaling \$119,606 for miscellaneous drainage repairs and improvements in 1997. This work was awarded through the quote process to five local contractors.



The 1997 drainage quotes included:

Storm Sewer Pipe, New	299'
Repaired Pipes	182'
Inlets, New	6
Inlets, Repaired	17
Dry Wells, New	11
Dry Wells, Repaired	3
Curb, New	6'
Curb, Repaired	1208'
Repaired Manholes	2
Pavement Repairs	10,837 syd

SIXTH STREET STORM SEWER COMPLETED

In November of 1996, the Board of Public Works and Safety contracted with SIECO for the design of a storm sewer extension between Jackson Street and Washington Street. When bids were opened in March, the bids were significantly higher than expected. The project was redesigned by SIECO and bids were opened again on June 10. Central Indiana Contracting, Inc. was submitted the low bid in the amount of \$64,502. The project was completed in August.

EASTRIDGE MANOR STORM SEWER PROJECT REJECTED

The Engineering Department prepared plans for a storm sewer project to drain the north end of the Eastridge Manor subdivision. That system was designed to outfall into Sloan Branch, a legal drain controlled by the County Drainage Board. In November, the Drainage Board voted not to allow the outfall into Sloan Branch until a thorough study of the drainage basin can be completed. The project is on hold until that study is completed.

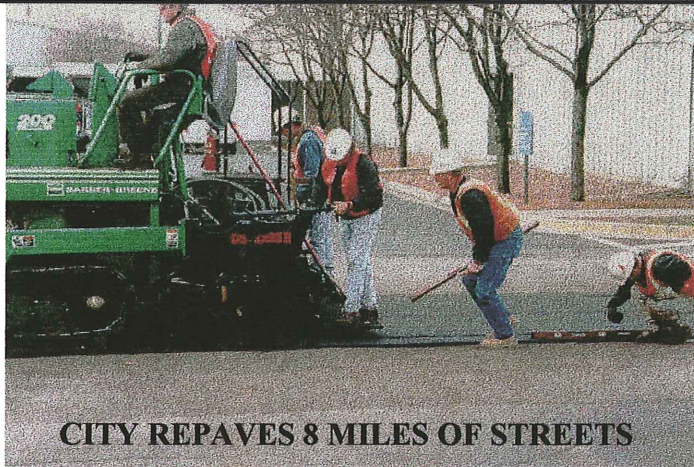


DESIGN-BUILD MOVES ARNOLD STREET PROJECT

On December 19, 1996, the Board of Public Works and Safety approved a design-build proposal from Roberts Asphalt, Inc. for the extension and grading of Arnold Street in the Columbus Municipal Airport. City Engineer David Hayward estimates that the use of the

design-build system saved the City approximately \$10,000 and several months time. The project was completed in July. Roberts' design partner on the project was Columbus Surveying and Engineering.

This street extension provides direct access to the airport from the northeast. The project has been on the Thoroughfare Plan and capital improvement plan for nearly ten years.



The City of Columbus contracted with Milestone Contractors on July 18, 1997 for the repaving of approximately 8 miles of streets. The \$502,351 project was completed August 27.

The project included the reconstruction of several severely damaged industrial park streets, milling and overlay of two streets, and the usual treatment of many other streets. Milestone also raised manholes, water valves, and detector housings, installed underdrains along several streets, and repaired damaged curbs at a cost of \$73,200. The City also included the installation of thermoplastic pavement markings on each of the streets at a cost of \$14,399.

This year's project covered approximately 3.8% of the City's total street mileage. That equates to a 25 year pavement life cycle. Asphalt pavement is usually projected to last 15 to 20 years between overlays.

CRACK SEALING

Reece Seal Coating was hired by the City to seal cracks on Central Avenue between 10th and 25th Streets last spring. The work, which cost \$5949.96, was completed in May.

The City also hired Rejuvtec to seal cracks on 10th Street between Gladstone Avenue and McClure Road. Rejuvtec also applied seal coat material on eastbound 10th Street between Central Avenue and Gladstone Avenue, as well as small sections of Poshard Road, Gladstone Avenue, and Beam Road.

All of the crack sealing and seal coating work performed by these two contractors will be examined this winter to evaluate the effectiveness of the materials and processes.



CITY TESTS WHITETOPPING ON MIDDLE ROAD

After several months of research, discussions with Shelby Materials and the Indiana Concrete Ready Mix Association, and site visits to other projects, the City decided that the whitetopping process was worth a try. The City contracted with CASE

Construction Co. on October 14, 1997. The project was completed on October 28 and the street was re-opened on the 31st.

Whitetopping is a new process whereby an existing asphalt street is milled and repaved with a thin layer of high-strength concrete. City Engineer David Hayward anticipates that this process will be especially useful in intersection areas where pavement rutting is a problem. "It's not something that will replace repaving with asphalt. It is another tool that we may use in the future when it is the right solution for the problem at hand."

The whitetopping project was done on a section of Middle Road between Poshard Drive and Cessna Drive. The project cost \$20,000.

CONCRETE STREETS REPAIRED

The City contracted with CASE Construction on April 15, 1997 for repairs to sections of Arlington Drive and Westenedge Drive in the Parkside area. The \$23,582.42 project included the removal and replacement of deteriorated sections of the concrete streets. The project was completed in May.

On October 13, 1997 the Board of Public Works contracted with K & M Construction for repairs to the concrete streets in the Everroad Park West area. The \$21,611.65 contract was completed in December.

